DELPHI SERIES

FEATURES

- High efficiency: 92.5% @ 3.3V/ 30A
- Size: 58.4mm x 22.8mm x 9.5mm (2.30”x0.90”x0.37”)
- Industry standard pin out
- Fixed frequency operation
- Input UVLO, Output OTP, OCP, OVP
- Monotonic startup into normal and pre-biased loads
- 2250V Isolation
- Basic insulation
- No minimum load required
- SMD and through-hole versions
- No negative current during power or enable on/off
- ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada) recognized, and TUV (EN60950) certified
- CE mark meets 73/23/EEC and 93/68/EEC directive

Delphi Series E48SH, 120W Eighth Brick Family DC/DC Power Modules: 48V in, 1.0V~15V out, 50A max

The Delphi Series E48SH Eighth Brick, 48V input, single output, isolated DC/DC converters are the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. This product family is available in either a through-hole or surface-mounted package and provides up to 120 watts of power or 50A of output current (1.2V and below) in an industry standard footprint and pinout. The E48SH converter operates from an input voltage of 36V to 75V and is available in output voltages from 1.0V to 15V. Efficiency is up to 93.5% (12V output). With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions. All models are fully protected from abnormal input/output voltage, current, and temperature conditions. The Delphi Series converters meet all safety requirements with basic insulation.

OPTIONS

- Positive On/Off logic
- Short pin lengths available
- External Synchronization
- Output OVP latch mode
- Heat spreader

APPLICATIONS

- Telecom/DataCom
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial/Test Equipment

SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage		36~75V	**Voltage Accuracy**	Typical	±1%
Switching Frequency	Typical (3.3V)	250KHz	**Line Regulation**	Typical	±0.1%
Isolation Voltage	In/Out	2250V	**Load Regulation**	Typical	±0.1%
Isolation Capacitance	Typical	1500PF	**Ripple & Noise**	Typical (3.3)	30 mV
Isolation Resistance	Minimum	100MΩ	**Current Limits**	Typical	130%
MTBF	Bellcore (3.3V)	2M	**Over Voltage**	Typical	120%
OTP	Typical	115°C	**Voltage Trim**		+10%, -30%
Size	58.4x22.8x9.5mm	(2.30"x0.90"x0.37")			

PART NUMBERING SYSTEM

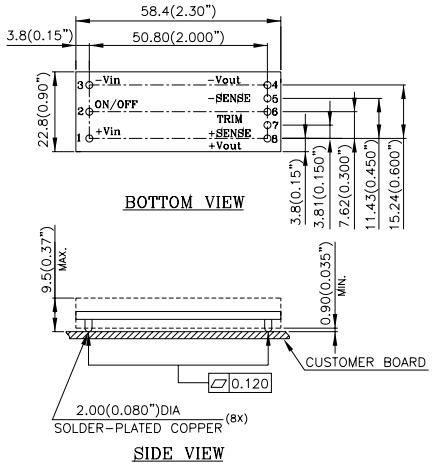
E	48	S	H	3R3	30	N	R	F	A
Type of Product	**Input Voltage**	**Number of Outputs**	**Product Series**	**Output Voltage**	**Output Current**	**ON/OFF Logic**	**Pin Length/Type**		**Option Code**
E - Eighth Brick	48- 36~75V	S - Single	H- 50A series	1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 – 2.5V 3R3 - 3.3V 050 - 5.0V 120 - 12V	10 - 10A 20 - 20A 30 - 30A 35 - 35A 40 - 40A 50 - 50A	N - Negative P - Positive	R - 0.170" N - 0.145" K - 0.110" M - SMD	F- RoHS 6/6 (Lead Free)	A - Standard functions B - Standard Functions, with output OCP (Available for 1.2V, 1.8V,and 2.5V) H – With heatspreader

MODEL LIST

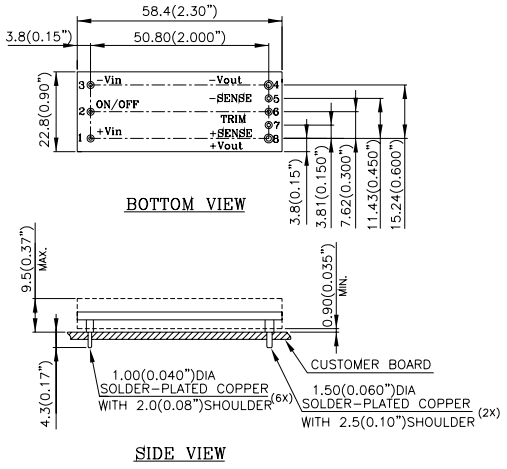
MODEL NAME	INPUT		OUTPUT		EFF @ 100% LOAD
E48SH1R250NRFA	36V~75V	2.3A	1.2V	50A	86.5%
E48SH1R540NRFA	36V~75V	2.3A	1.5V	40A	89%
E48SH1R840NRFA	36V~75V	2.7A	1.8V	40A	90%
E48SH2R535NRFA	36V~75V	2.9A	2.5V	35A	89.5%
E48SH3R330NRFA	36V~75V	3.6A	3.3V	30A	92%
E48SH05020NRFA	36V~75V	3.6A	5.0V	20A	90%
E48SH12010NRFA	36V~75V	4.3A	12V	10A	93.5%

MECHANICAL DRAWING

Surface-mount module



Through-hole module



NOTES:
DIMENSIONS ARE IN MILLIMETERS AND (INCHES)
TOLERANCES: X.Xmm±0.5mm(X.XX in.±0.02 in.)
X.XXmm±0.25mm(X.XXX in.±0.010 in.)

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WARRANTY

Delta offers a two (2) year limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.